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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KIM, WESLEY LEO

ART UNIT PAPER NUMBER

2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/29/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/785,264

Applicant(s)

JANG, YOUNG-GEUN

Examiner

Wesley L. Kim

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 15-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Regarding the USC 112 rejection of Claim 2, the examiner mistakenly left the rejection of claim 2 in the response (mail date 10/6/06) to the applicants' amendment (mail date 7/3/06). The rejection is withdrawn.

Upon further inspection of the evidence provided (7/3/06) with the 37 C.F.R 1.131 Declaration, the examiner notes that the evidence does show all the limitations of: (1) regarding claim 1, the evidence fails to show "determining an initial service provider of a called terminal from the called terminal information, and transmitting the call request to a communication network formed by the determined initial service provider of the called terminal" and (2) "determining a changed service provider of the called terminal based on the called terminal information included in the call request signal transmitted from the first MSC" (3) "transmitting the call request signal received from the second MSC to the called terminal so that the called terminal can communicate with the calling terminal over a communication network formed by the changed service provider". So the examiner has withdrawn the finality of the rejection.

Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-2 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koster (US Patent 6240293 B1) in view of Giuhath et al (US Patent 5881145).

**Regarding Claims 1 and 6**, Koster teaches mobile communication system for providing a phone number maintaining service capable of allowing a user to continue to use a previously assigned phone number regardless of a change in service provider (Abstract), the system comprising:

a second MSC (Fig.1;55, donor service provider) for determining a changed service provider of the called terminal based on the called terminal information included in the call request signal transmitted from the first MSC (Col.6;53-55, donor service provider is associated with second MSC), and transmitting the call request signal to a communication network formed by the determined service provider (Col.6;55-57); and

a third MSC (Fig.1;65, ported-to service provider) for transmitting the call request signal received from the second MSC to the called terminal so that the called terminal can communicate with the calling terminal over a communication network formed by the changed service provider (Col.6;53-55 and Col.6;1-9, call is routed to port-to service provider to connect the call via third MSC), however Koster **is silent on** a first mobile switching center (MSC) for receiving a call request signal with calling terminal information and called terminal information, determining an initial service provider of a called terminal from the called terminal information, and

transmitting the call request signal to a communication network formed by the determined initial service provider of the called terminal.

Giuhat teaches that redirection of calls to ported directory numbers are routed using the ported directory number as the called party number, from an originating network node towards the donor network node (Abstract:6-9). It is obvious that this concept would also apply to Koster's system of processing calls and providing local number portability in a wireless communications environment, where the originating network (i.e. originating service provider) would comprise an MSC (Koster; Col.6:1-9, MSC's are essential for routing calls between wireless base stations and PSTN's and also allows mobile users to communicate with one another). Utilizing the ported directory number (i.e. the dialed number), the originating service provider would receive a call request at the first MSC and determine the initial service provider (i.e. donor service provider) and route the call accordingly.

To one of ordinary skill in the art, it would have been obvious to modify Koster with Giuhat since they are from similar search areas, viz. systems for providing number portability, such that a first mobile switching center (MSC) for receiving a call request signal with calling terminal information and called terminal information, determining an initial service provider of a called terminal from the called terminal information, and transmitting the call request signal to a communication network formed by the determined initial service provider of the called terminal, to provide a method where number portability services may be provided in wireless telecommunication networks.

**Regarding Claims 2 and 7**, Koster further teaches a subscriber management database (DB) on every communication network formed by each service provider for storing service change information including information relating to an initial service provider of the calling terminal and the called terminal, and information relating to a change in the service provider (Col.6:37-46, NPDB); wherein the first MSC detects an initial service provider of the called terminal based on the service change information (Col.6:46-51 and Col.6:61-65, first MSC detects initial service provider based on LRN from the NPDB), and the second MSC determines whether a service of the called terminal is changed, based on the service change information (Col.6:46-51 and Col.6:61-65, second MSC determines whether a service of the called terminal is changed based on LRN from the NPDB).

2. Claims 3-5 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koster (US Patent 6240293 B1) and Giuhat et al (US Patent 5881145) in further view of Mazzarella et al (US Pub. 2002/0107011 A1).

**Regarding Claims 3 and 8**, Koster and Giuhat teaches all the limitations as recited in claims 2 and 7, however the combination **is silent on** the service change information includes serial numbers of the calling terminal and the called terminal, a service provider change identification number, a service provider identification number, and a mobile identification number.

Mazzarella teaches that depending on the service provider the information needed to provide for a service change is different (Par.18:9-13). Mazzarella teaches that all of the following are necessary for providing number portability when

a service is changed, the serial numbers of the calling terminal and called terminal (Par.16;9-16, i.e. ESN), a service provider change identification number (Par.18;9-11, new service providers ID), a service provider identification number (Par.14;8-12, the current provider is known), and a mobile identification number (Par.18;9-11, the MDN is the mobile identification number), therefore to the examiner it is obvious that a service change information could comprise of all the above.

To one of ordinary skill, in the art, it would have been obvious to modify Koster and Giuhath with Mazzarella at the time of the invention, since they are from similar search areas, viz. number portability, such that the service change information includes serial numbers of the calling terminal and called terminal, a service provider change identification number, a service provider identification number, and a mobile identification number, since it is obvious that all of the above are necessary for porting numbers between service providers even though they are not explicitly disclosed in every reference pertaining to the topic of number portability, to provide a means of correctly routing the call to the appropriate switching node at the destination recipient network.

**Regarding Claims 4 and 9**, the combination as discussed above teaches all the limitations as recited in claims 3 and 8, Koster teaches first MSC determines the dialed digits and routes the call paths (Col.6;1-9) and the first MSC can query the NPDB to determine appropriate treatment of a call (Col.9;1-2). It is obvious the first MSC determines the mobile identification number stored in the subscriber management DB, determines the service provider change identification number and

the service provider identification number stored in association with the determined mobile identification number, and determines an initial service provider of the called terminal through the service provider change identification number and the service provider identification number (See rejection of Claim 3), such that

To one of ordinary skill, in the art, it would have been obvious to modify Koster and Giuhat with Mazzearella at the time of the invention, since they are from similar search areas, viz. number portability, such that the first MSC determines the mobile identification number stored in the subscriber management DB, determines the service provider change identification number and the service provider identification number stored in association with the determined mobile identification number, and determines an initial service provider of the called terminal through the service provider change identification number and the service provider identification number, since it is obvious that all of the above are necessary for porting numbers between service providers even though they are not explicitly disclosed in every reference pertaining to the topic of number portability, to provide a means of correctly routing the call to the appropriate switching node at the destination recipient network.

**Regarding Claims 5 and 10**, the combination as taught above teaches all the limitations as recited in claims 4 and 9, and Koster further teaches the second MSC determines whether a service provider of the called terminal is changed, based on the service provider change identification number (Col.6:37-53, the MSC utilizes



the NPDB to determine of a service provider of the called terminal is changed, based on the service provider change identification number).

3. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazzarella et al (U.S. Pub 2002/0107011 A1) in view of Himmel et al (U.S. Pub 2003/0134660 A1).

**Regarding Claim 11**, Mazzarella teaches of a mobile terminal for receiving a phone number maintaining service capable of allowing a user to continue to use a previously assigned phone number regardless of a change in service provider (Abstract), however Mazzarella is **silent on** the terminal comprising: a memory for storing NAM (Number Assignment Module) information; a key input module having a plurality of keys, for generating a call request signal input by the user; an RF (Radio Frequency) module for transmitting and receiving a call request signal including called terminal information and calling terminal information; a display for displaying a phone number of a calling terminal, determined from the received calling terminal information; and a controller for transmitting the call request signal to a called terminal through the RF module, and upon receiving a call request signal through the RF module, determining a phone number of the calling terminal from the calling terminal information included in the received call request signal.

Himmel teaches a mobile phone comprises a memory for storing NAM (Number Assignment Module) information (Par.37;13-15); a key input module having a plurality of keys (Fig.2;13), for generating a call request signal input by

the user (well known); an RF (Radio Frequency) module for transmitting and receiving a call request signal including called terminal information and calling terminal information (Fig.2;18 and Fig.2;19, and a call request signal including called and calling terminal information is well known in the art, See rejection of Claim 1); a display for displaying a phone number of a calling terminal determined from the received calling terminal information (Fig.2;12, well known that a display displays a phone number of calling terminal); and a controller for transmitting the call request signal to a called terminal through the RF module (Fig.2;25), and upon receiving a call request signal through the RF module, determining a phone number of the calling terminal from the calling terminal information included in the received call request signal (displaying caller id is very well known in the art).

The examiner notes that Himmel does not does not teach number portability, however the examiner only wishes to extract the generic teaching that a mobile phone comprises all of the components necessary to allow a user to continue to use a previously assigned phone number regardless of a change in service provider.

To one of ordinary skill in the art, it would have been obvious to modify Mazzarella with Himmel at the time of the invention, such that the mobile phone comprises all the components recited in the limitations, to provide a method of allowing a user to continue to use a previously assigned phone number

regardless of a change in service provider especially since Luis already teaches that a phone is capable of doing so.

**Regarding Claim 12**, Mazzarella and Himmel teach all the limitations as recited in claim 11, and Mazzarella further teaches that information can be stored in the subscribers mobile station (Par.18, i.e. NAM information). Mazzarella teaches that all of the following are necessary for providing number portability when a service is changed including a service provider change identification number (Par.18;9-11, new service providers ID), a service provider identification number (Par.14;8-12, the current provider is known) and a mobile identification number (Par.18;9-11, MDN is a mobile identification number), for receiving a mobile communication service, therefore to the examiner it is obvious that the NAM information could comprise of all the above.

**Regarding Claim 13**, the combination as discussed above teaches all the limitations as recited in claim 12, and Mazzarella further teaches the service provider change identification number is updated in the memory each time a service provider to which the mobile terminal has subscribed is changed (Par.23).

**Regarding Claim 14**, the combination as discussed above teaches all the limitations as recited in claim 13, and Mazzarella further teaches the controller determines the service provider change identification number from the calling terminal information (Par.23, the service provider change identification number is sent to mobile so the service provider change identification is known, i.e. determined by the controller), determines a changed service provider identification number

based on the detected service provider change identification number (Par.23, the mobile now knows, i.e. determines, the changed service provider id based on the OTA commands with the new carrier information), and determines a phone number of the calling terminal by combining the changed service provider identification number with the mobile identification number included in the calling terminal information (determining a phone number of the calling terminal, i.e. caller id, is well known in the art).

### ***Allowable Subject Matter***

1. Claims 15-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter:

Claim 15 recites the service provider change identification number has two digits, a first digit indicates addition or subtraction on the service provider identification number and a second digit indicates a weight for performing addition or subtraction on the service provider identification number. These claims comprise a particular combination of elements, which is neither taught nor suggested by the prior art.

Claims 16-18 are dependent on objected claim 15.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley L. Kim whose telephone number is 571-272-7867. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WLK



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